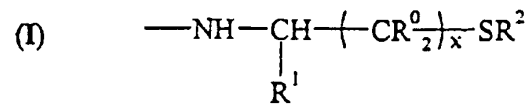
CLAIMS:

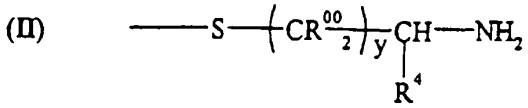
1. A means for preventing post-surgical adhesions, characterized in that it comprises at least one collagenic peptide which is modified by grafting free or substituted thiol functions, which is crosslinkable and/or at least partly crosslinked and the thiol functions of which are provided by mercaptoamino residues exclusively grafted onto the aspartic and glutamic acids of the collagenic chains, via amide bonds.

2. The means according to claim 1, characterized in that at least some of the modified collagenic peptide is in the form of a precursor **A** onto which are grafted mercaptoamino residues bearing substituted thiol functions, at least some of these mercaptoamino residues corresponding to the following general formula (**I**):



in which:

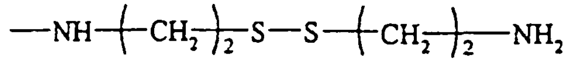
- x = 1 or 2,
- R^0 = H or CH_3,
- R^1 represents H or $COOR^3$ with R^3 corresponding to a hydrocarbon-based radical of the aliphatic, aromatic or alicyclic type, preferably of the alkyl, alkenyl, aryl, aralkyl, alkylaryl, aralkenyl or alkenylaryl type, and even more preferably of the methyl or ethyl type;
- R^2 is an aliphatic and/or alicyclic and/or aromatic radical, preferably an alkyl or an acyl, optionally a sulfur-containing and/or amino- alkyl or acyl, and even more preferably R^2 corresponds to the following formula (**II**):



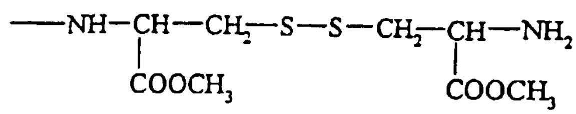
- with y, R^{00} and R^4 corresponding to the same definition as that given in the legend in formula (**I**) for x, R^0 and R^1.

3. The means according to claim 2, characterized in that the mercaptoamino residues grafted onto the **A** form of the collagenic peptide are chosen from the group of the following radicals:

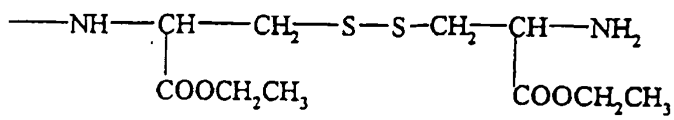
(I.1)



(I.2)



(I.3)



4. The means according to claim 1, characterized in that at least some of the collagenic peptide is in a thiol-type intermediate crosslinkable precursor form **B**, onto which are grafted mercaptoamino residues, at least some of which correspond to the general formula (**I**) given in claim 2 and in which R^2 = H and in which R^3 may also represent hydrogen or a cation capable of forming a salt with COO^-, this cation preferably being Na^+, K^+, Li^+.

5. The means according to claim 1, characterized in that at least some of the modified collagenic peptide is in a crosslinked form **C** comprising collagenic chains attached to one another by disulfide bridges, the constituent sulfur atoms of which belong to mercaptoamino residues exclusively grafted onto the aspartic and glutamic acids of the collagenic chains, via amide bonds.

6. The means according to claim 5, characterized in that the collagenic peptide in **C** form is obtained from the collagenic peptide **B** according to claim 4.

7. The means according to any one of claims 1 to 4, characterized in that at least some of the collagenic peptide (**A** and/or **B** and/or **C**) also carries grafts G attached to at least some of the free amine units of the collagenic chain, via amide bonds, G being an acyl comprising a hydrocarbon-based entity, EXCLUDING mercaptoamino residues, in particular those as defined above, this entity optionally containing hetero atoms (advantageously O and/or N), and preferably being chosen from alkyls and/or alkenyls and/or alicyclics and/or aromatics, and even more preferably from the groups comprising an alkyl chain, optionally unsaturated or corresponding to the following formula (**III**):

$$\text{(III)} \quad -CO-\left(CH_2\right)_z-\left(O-CH_2-\underset{}{\overset{R^5}{\overset{|}{C}}}H\right)_n-O-R^6$$

with:

- R^5 = H or CH_3;
- R^6 = H, or a linear or branched alkyl radical, and preferably a methyl;
- z = 0, 1 or 2 and n > 0;

8. The means according to any one of claims 1 to 7, characterized in that it is in the form of a film.

9. The means according to any one of claims 1 to 8, characterized in that it comprises a composite comprising, firstly, a matrix comprising the collagenic peptide as defined in claims 1 to 7 and, secondly, a reinforcement material included in this matrix, this reinforcement being chosen from biodegradable polymers.

10. The means according to any one of claims 1 to 9, characterized in that the reinforcement is in the form of a fibrous substance, which is woven or nonwoven, preferably woven, and even more preferably woven with knitted stitches.

11. The means according to claim 9 or claim 10, characterized in that the reinforcement material is chosen from α-hydroxycarboxylic acid (co)polymers, preferably polylactic acids and/or polyglycolic acids.

12. The means according to claim 9, characterized in that it is in the form of a film comprising a fibrous reinforcement on only part of its surface.

13. The means according to any one of claims 1 to 7, characterized in that it is in a nonsolid form which is crosslinkable and/or at least partly crosslinked and which can be applied and/or implantable onto and/or into a support.

14. The means according to claim 13, characterized in that it comprises collagenic peptide in liquid form.

15. The means according to claim 13, characterized in that it comprises collagenic peptide in the form of a gel.

16. The means according to any one of claims 13 to 15, characterized in that it comprises at least one tool - preferably a syringe or a spray - for storing and for applying into and/or onto a support, a nonsolid form (as defined in claim 13) of the crosslinkable and/or at least partly crosslinked collagenic peptide.

17. The means according to claim 16, characterized in that it comprises an oxidizing agent for crosslinking the collagenic peptide.

18. A process for preparing the means for preventing post-surgical adhesions according to any one of claims 1 to 12, characterized in that it comprises the following essential steps:

1. preparing a solution, preferably an aqueous solution, of crosslinkable precursor of modified collagenic peptide;
2. optionally filtering this solution so as to extract therefrom the elements which are greater than or equal to 0.8 μm, preferably greater than or equal to 0.45 μm, and even more preferably greater than or equal to 0.2 μm in size;
3. molding the filtrate in the intended configuration for the means for preventing post-surgical adhesions to be prepared;
4. optionally gelling the molded solution, in a maturation phase, by decreasing its temperature below its gelling temperature;
5. optionally eliminating the solvent, preferably by evaporation;
6. bring about the crosslinking, preferably by oxidation;
7. where appropriate, eliminating, with successive washes, the oxidizing agent possibly used;

8. optionally impregnating the material which is crosslinked or which is in the process of being crosslinked, using a solution of at least one plasticizer (for example: glycerol, low molecular weight polyethylene glycol);
9. optionally drying the crosslinked material;
10. optionally cutting the material to the size for use;
11. optionally sterilizing the crosslinked material by radiation.

19. A process for preparing the means for preventing post-surgical adhesions according to claim 13, characterized in that it comprises the following essential steps:

1. preparing a solution, preferably an aqueous solution, of crosslinkable precursor of modified collagenic peptide;
2. optionally filtering this solution so as to extract therefrom the elements which are greater than or equal to 0.8 μm, preferably greater than or equal to 0.45 μm, and even more preferably greater than or equal to 0.22 μm in size;
3. optionally concentrating the solution;
4. packaging the solution sterilely under an inert atmosphere.

20. The process according to claim 18 or 19, characterized in that the solution prepared in step 1 has a titer in terms of crosslinkable precursor of the collagenic peptide:

- greater than or equal to 1%,
- preferably between 1 and 15%.

21. The process according to claim 19 or 20, characterized in that the packaged solution is applied onto a support and in that crosslinking is brought about, preferably using a biocompatible oxidizing agent.